

CLAIMS

We claim:

1 1. A focal plane plate for a high resolution camera with light-sensitive
2 semiconductor sensors comprising:
3 housings for the light sensitive semiconductor sensors, said housings having a
4 form; and
5 adjustment elements arranged on the focal plane plate at arrangement locations
6 of said housings, said adjustment elements having a form complementary to the form of said
7 housings.

1 2. The focal plane plate in accordance with claim 1, wherein said adjustment
2 elements comprise one from a group consisting of parallelepipedal islands and inserts.

1 3. The focal plane plate in accordance with claim 2, further comprising cutouts for
2 releasably receiving said inserts.

1 4. The focal plane plate in accordance with claim 3, wherein said housings are
2 permanently connected to the complementarily adapted adjustment elements.

1 5. The focal plane plate in accordance with claim 3, wherein said housings and
2 associated inserts are integrally formed.

1 6. The focal plane plate in accordance with claim 3, further comprising adjustment
2 webs arranged in said cutouts in the focal plane plate.

1 7. The focal plane plate in accordance with claim 3, further comprising focal plane
2 plate holes adapted to receive heat pipes for passing coolant therethrough.

1 8. The focal plane plate in accordance with claim 7, wherein said focal plane plate
2 holes are arranged to pass through one of said islands and said cutouts, said inserts further
3 comprising insert holes, wherein said focal plate holes form a duct with said insert holes.

1 9. The focal plane plate in accordance with claim 1, wherein the focal plane plate
2 and said adjustment elements comprise a expansion compatible material with respect to said
3 housings.

1 10. The focal plane plate in accordance with claim 9, wherein said adjustment
2 elements comprise a first material and the focal plane plate comprises a second material, said
3 first material having a greater thermal conductivity than said second material.

1 11. The focal plane plate in accordance with claim 9, wherein said housings, said
2 adjustment elements and the focal plane plate are composed of the same material.

1 12. The focal plane plate in accordance with claim 9, wherein said housings, said
2 adjustment elements and the focal plane plate are composed of aluminum nitride ceramic.

1 13. The focal plane plate in accordance with claim 1, wherein the light-sensitive
2 semiconductor sensors comprise contact pins and the focal plane plate is plated in a region of
3 said contact pins.

1 14. The focal plane plate in accordance with claim 13, wherein said inserts further
2 comprise side walls having conductor tracks electrically connectable to said contact pins, and
3 separate contact pins for extending a length of said contact pins.

1 15. The focal plane plate in accordance with claim 14, wherein said conductor
2 tracks comprise silver-palladium paste printed onto said inserts.

1 16. The focal plane plate in accordance with claim 1, further comprising a
2 temperature sensor arranged on said adjustment elements.

1 17. The focal plane plate in accordance with claim 15, wherein said inserts further
2 comprise a top side having chamfered edges.

1 18. The focal plane plate in accordance with claim 14, wherein said cutouts further
2 comprise additional cutouts in a region of said contact pins, said additional cutouts comprising
3 plated-through holes.

1 19. The focal plane plate in accordance with claim 1, wherein the light-sensitive
2 semiconductor sensors comprise electronic circuitry arranged on an underside of the focal
3 plane plate.

1 20. A method for adjusting housed light-sensitive semiconductor sensors on a focal
2 plane plate comprising the steps of:

3 measuring a position of a surface of the light-sensitive semiconductor sensors
4 with respect to an underside of the housings;
5 forming a surface of adjustment elements such that the surface is
6 complementarily shaped with respect to housing forms of the light-sensitive semiconductor
7 sensors; and
8 connecting the light-sensitive semiconductor sensors to the formed adjustment
9 elements, wherein pixels of the light-sensitive semiconductor sensors lie substantially in one
10 plane when fitted onto said adjustment elements.